

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In the Patent Application of

DOUGLAS D. LECLEAR AND
CAROLYN L. SLONE

Serial No.: 10/648,575

Group Art Unit: 1744

Filed: August 26, 2003

Examiner: Till, Terrence R

For: VACUUM SYSTEM FOR A
VEHICLE

APPEAL BRIEF

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is an Appeal Brief pursuant to 37 C.F.R. § 41.37 in support of Applicants' appeal of the Final Rejection of the Examiner, mailed June 14, 2006, of claims 1-5 and 7-9. Each of the topics required by 37 C.F.R. § 41.37 is presented herewith and is labeled appropriately.

I. REAL PARTY IN INTEREST

Whirlpool Corporation, having offices in Benton Harbor, Michigan ("Whirlpool") is the real party in interest of the present application. An assignment of all rights in the parent application for the present application to Whirlpool was executed by the inventors and recorded in the U.S. Patent and Trademark Office at Reel 014230, Frame 0153.

II. RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences related to the present application of which Appellants, Appellants' legal representatives, or Assignee are aware.

III. STATUS OF CLAIMS

Claims 1-5 and 7-9, which are presented in the Appendix, are pending in the application and have been twice rejected by the Examiner on the same grounds. Claims 6, 10, and 11 are pending in the application and have been objected to by the Examiner as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 13-16, 18, and 21-23 have been allowed and are not presented here on appeal. Claims 12, 17, and 19-20 have been cancelled from the application. Accordingly, the Appellants hereby appeal the final rejection of claims 1-5 and 7-9.

IV. STATUS OF AMENDMENTS

Subsequent to the final Office Action dated June 14, 2006, no amendments have been made to the claims.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1 of the instant application calls for a vacuum system for a vehicle.¹ The vacuum comprises a hose storage module adapted to house a retractable vacuum hose having a first end and a second end, *Application, p. 5, ¶ [0030], ln. 2-3 and 14-16, Figs. 7-10*, a vacuum console adapted to house a vacuum nozzle attached to the first end of the vacuum hose, *Application, p. 4, ¶ [0026], ln. 1-2, Fig. 3*, and a vacuum canister fluidly connected to the second end of the vacuum hose

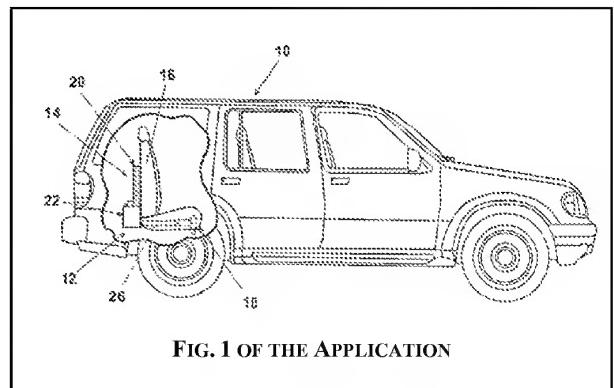


FIG. 1 OF THE APPLICATION

¹ 37 CFR §41.37(c)(1)(v) requires reference to the specification by page and line number. The Application was filed electronically using a version of the U.S. Patent Office software that did not accommodate line numbers. Thus, references are given by page number, paragraph number, and the line number of the referenced paragraph.

Application, p. 5, ¶ [0027], ln. 7-8, Fig. 6, the hose storage module being positioned within the vehicle and configured to allow the retractable hose to reach any portion of the interior space of the vehicle, Application, p. 4, ¶ [0025], ln. 2-5, Fig. 1, Application, p. 7, ¶ [0035], ln. 2-5.

Claim 2 calls for the vacuum console to comprise a pivotal and slideable cover in the shape of a vehicle seat, *Application, p. 4, ¶ [0026], ln. 6-7, Figs. 2-3.*

Claim 3 calls for the vacuum console to be part of the vehicle seat, *Application, p. 4, ¶ [0026], ln. 2-5.*

Claim 4 calls for the nozzle to comprise a handle portion and a suction portion, *Application, p. 5, ¶ [0027], ln. 1-2, Fig. 5, the handle portion being configured with a first switch being electrically connected to a vacuum motor to operate the vacuum and a second switch being electrically connected to the hose storage module to operate a motorized extension and retraction of the hose, Application, p. 5, ¶ [0027], ln. 2-5, Figs. 4-5.*

Claim 5 calls for the vacuum canister to be driven by a vacuum motor which is rechargeable by a deep draw battery *Application, p. 5, ¶ [0028], ln. 1-5, ¶ [0029], ln. 1-2, Fig. 6, 11.*

Claim 7 calls for the hose storage module to comprise a hose retraction system having a roller with a concave surface, the concave surface having a radius roughly the same as that of the vacuum hose, *Application, p. 6, ¶ [0031], ln. 1-5, Figs. 8-9.*

Claim 8 calls for the roller of claim 7 to have a plurality of projections sized and spaced from each other to engage a corresponding plurality of adjacent valleys on at least one side of the

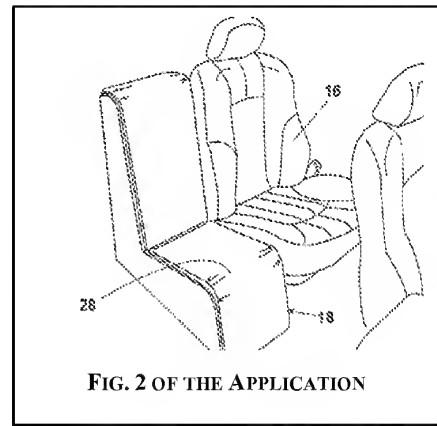


FIG. 2 OF THE APPLICATION

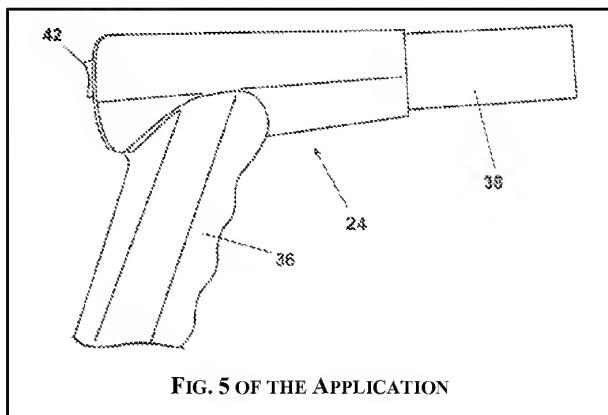


FIG. 5 OF THE APPLICATION

vacuum hose, *Application*, p. 6, ¶ [0031], ln. 5-6, Figs. 8-9.

Claim 9 calls for the electrical connection of claim 4 to be made by electrical wiring that runs along the hose and is connected to a wiring module, *Application*, p. 7, ¶ [0034], ln. 1-4, Figs. 8-9, Fig. 7.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. In the Office Action of June 14, 2006, the Examiner rejected claims 1-3 and 5 under 35 U.S.C. § 103(a) as allegedly being unpatentable over French Patent No. 2689474 to Laurent (“Laurent”) in view of German Patent No. 29921025 to Schollmayer (“Schollmayer”). Appellants disagree with the Examiner’s assertion that the Laurent and Schollmayer references render claims 1-3 and 5 obvious to one skilled in the art.

B. In the Office Action of June 14, 2006, the Examiner rejected claims 4 and 7-9 under 35 U.S.C. § 103(a) as allegedly being unpatentable over French Patent No. 2689474 to Laurent (“Laurent”), as modified by German Patent No. 29921025 to Schollmayer (“Schollmayer”), as applied to claims 1 above, and further in view of United States Patent No. 6,817,058 to Harrelson (“Harrelson”). Appellants disagree with the Examiner’s assertion that the Laurent, Schollmayer, and Harrelson references render claims 4 and 7-9 obvious to one skilled in the art.

VII. ARGUMENTS

A. **Applicants Disagree with the Rejection of Claims 1-3 and 5 as Obvious in View of the Asserted Combination of Laurent and Schollmayer.**

1. **Claims 1-3 and 5 are not Obvious Over the Combination of Laurent and Schollmayer as the Combination of Laurent and Schollmayer is Improper.**

The law governing an obviousness rejection based on the combination of references is well known:

A claimed invention is unpatentable if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time

the invention was made to a person having ordinary skill in the art....The ultimate determination of whether an invention would have been obvious under 35 U.S.C. §103(a) is a **legal conclusion based on underlying findings of fact.**²

A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field....Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher."

Most if not all inventions arise from a combination of old elements....Thus, every element of a claimed invention may often be found in the prior art....However, **identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention.**...Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, **there must be some motivation, suggestion or teaching of the desirability of making the specific combination** that was made by the applicant....Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference.

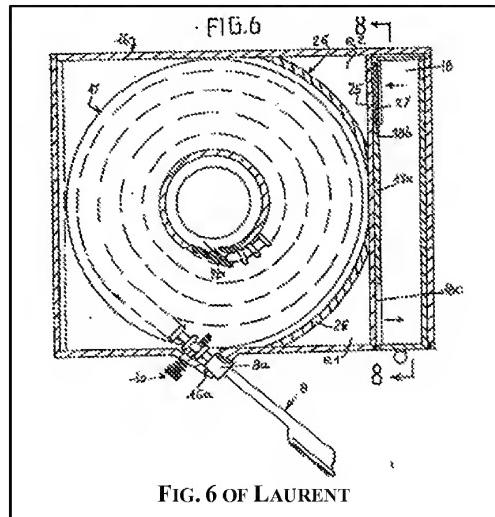
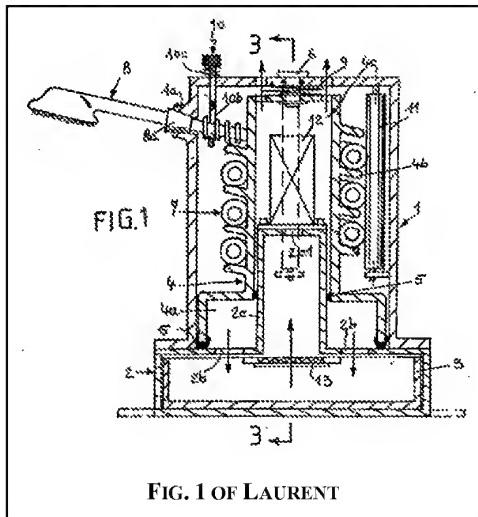
The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved....In addition, the teaching, motivation or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references....The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art....Whether the Patent Office Examiner relies on an express or an implicit

² The underlying factual inquiries include (1) the scope and content of the prior art; (2) the level of ordinary skill in the prior art; and (3) the differences between the claimed invention and the prior art. *Graham v. John Deere Co.*, 383 U.S. 1, 17, 15 L. Ed. 2d 545, 86 S. Ct. 684 (1966).

showing, the Examiner must provide particular findings related thereto....Broad conclusory statements standing alone are not "evidence."

In Re Werner Kotzab, 217 F.3d 1365; 55 U.S.P.Q.2d (BNA) 1313 (Fed. Cir. 2000)(citations omitted)(emphasis added).

Laurent discloses a vacuum cleaning unit for a vehicle comprising a debris collecting drawer (18), and a hose (7) and nozzle (8) for drawing debris into the collecting drawer (18). The hose (7) is manually wound onto a rotatable drum (17) for storage.



Schollmayer discloses a vacuum cleaner that is attached to a molded mounting (11) on the rear seat (4) of a vehicle and facing the trunk (10) of the vehicle. The vacuum cleaner comprises a vacuum source (1) and a bag (2). An intake opening (8) for attaching a hose (6) is accessed by folding down the armrest of the rear seat. When not in use, the hose and various attachments (7) are stored in a separate storage container (5) and the intake opening (8) is covered with an encasing (9).

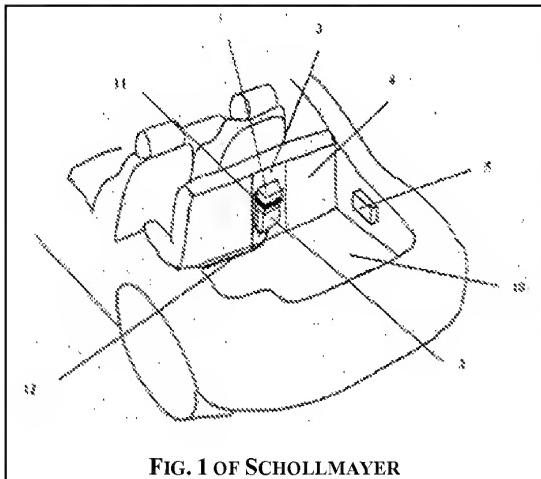


FIG. 1 OF SCHOLLMAYER

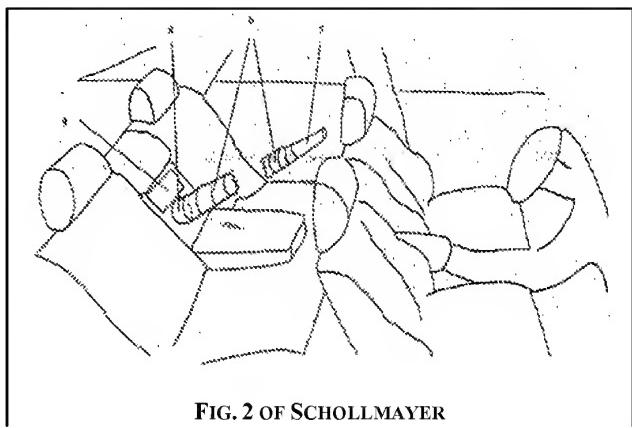


FIG. 2 OF SCHOLLMAYER

a). **There is no Motivation, Suggestion, or Teaching to Combine Laurent with Schollmayer.**

The combination of Laurent and Schollmayer fails as there is no teaching or suggestion to make the combination. The standards for a finding of obviousness must be strictly adhered to. Simply citing one or more prior art references that illustrate different facets of the invention and then concluding that it would be obvious to combine the references to create Applicant's invention is wholly inadequate.

On page 5 of the Office Action, the Examiner sequentially describes the hose storage module of the vacuum system of Laurent and the vacuum console adapted to house the vacuum nozzle of Schollmayer. Then the Examiner states that, "It would be obvious to a person skilled in the art at the time the invention was made to provide Laurent with a console in view of the teaching of Schollmayer in order to be able to access the hose as well as hide it when not in use."

In making this statement, the Examiner merely provides generalized reasons that are unsupported by the references for making the combination. The law requires more. It requires that the basis for combining references must be found in the references, not any reason that the Examiner might be able to conjure up in hindsight. It requires that the Examiner articulate the reasons one of ordinary skill in the art would have been motivated to make the combination. The Examiner does not point to any teaching or suggestion in the references to make the asserted combination, as is required in a *prima facie* obviousness rejection, nor could the Examiner because the stated reason of using a console to hide the hose when not in use is not found in Laurent. As no such teaching or suggestion is sufficiently provided, the obviousness rejection fails to meet the *prima facie* standard and is not tenable. The Examiner has simply impermissibly relied upon “broad conclusory statements standing alone,” which can only lead to the conclusion that the Examiner is simply relying on impermissible hindsight reconstruction of Applicants’ invention.

b). The Combination of Laurent with Schollmayer Teaches Away From Making the Combination.

According to § 2145 of the MPEP, “It is improper to combine references where the references teach away from their combination.” The rejection is improper in that Laurent and Schollmayer teach against making the combination as asserted because they teach antithetical concepts and are, therefore, not combinable.

Laurent teaches a self-contained vacuum cleaning unit, while Schollmayer teaches a vacuum cleaner that requires assembly before it can be used. Specifically, the vacuum cleaning unit taught by Laurent can be used simply by drawing the vacuum hose out from the reel. To use the vacuum cleaner taught by Schollmayer, the hose and attachment must be brought out from the separate storage container and then attached to the vacuum cleaner. Essentially, Laurent teaches integral storage of the vacuum hose, while Schollmayer teaches discrete and remote hose storage. These two concepts cannot be reconciled with each other and therefore, the combination of Laurent and Schollmayer is improper and the rejection fails accordingly.

c). The Combination Changes the Principle of Operation of Both Laurent and Schollmayer.

As stated in § 2143.01 of the MPEP, “If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.” The MPEP cites *In re Ratti*, 270 F.2d 810 (CCPA 1959) in support of this statement. In *Ratti*, the Court reversed a rejection based on a combination of references, wherein the primary reference teaches a rigid seal with a sheet metal reinforcing member and the secondary references teaches a gasket with resilient spring fingers. The rejection suggested replacing the reinforcing member with the resilient spring fingers, but the Court held “that the combination of [the references] is not a proper ground for rejection of the claims here on appeal. This suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as *a change in the basic principles under which the [primary reference] construction was designed to operate.*” *In re Ratti*, at 813 (emphasis added).

Applicants contend that combining Schollmayer with Laurent is, therefore, untenable. The combination as suggested in the office action would in essence require placing the Laurent vacuum cleaning unit behind and pulling its nozzle and hose through an opening in the seat and leaving the nozzle in the opening for removal by a user. However, neither reference suggests making such a configuration. In fact, the combination as suggested would change the principle of operation of both Laurent and Schollmayer. Laurent operates on the principle of an externally located nozzle connected to a retractable hose. Schollmayer works on the principle of a remotely stored hose and nozzle, with the hose removable coupled to an inlet to the vacuum that is located within the seat. To locate the vacuum of Laurent behind the seat and the nozzle of Laurent within the duct in the seat is not suggested by either reference and destroys the external access principle of Laurent and the remote storage principle of Schollmayer. The combination cannot be sustained because it changes the operating principles of Laurent and Schollmayer.

d). The Combination of Laurent with Schollmayer is Based on a Mischaracterization of the Teaching of Schollmayer.

It is respectfully submitted that the combination of Laurent and Schollmayer is based on a mischaracterization of the teaching of Schollmayer. The Office Action refers to Schollmayer as having a “console”, which is incorrect. Schollmayer discloses a seat with a pivotable armrest that can be lowered. The vacuum mounted to the back of the seat has an inlet conduit that extends through the seat and to which the remotely stored hose can be coupled. Schollmayer does not disclose storing any portion of the hose or nozzle within the seat. As such, it is an error for the Office Action to characterize the seat with an arm rest as a console. If referring to the seat with an armrest as a console, it erroneously ascribes to the seat the function of being able to store something, which is not supported by Schollmayer.

2. Claims 1-3 and 5 are Non-Obvious Over the Alleged Combination, Assuming the Combination is Tenable.

Group A: Claims 1-3 and 5

Claim 1 of the present application calls for a vacuum system for a vehicle comprising a hose storage module, a vacuum console, and a vacuum canister. The hose storage module is adapted to house a retractable vacuum hose having a first end and a second end. A vacuum console is adapted to house a vacuum nozzle attached to the first end of the vacuum hose. The vacuum canister is fluidly connected to the second end of the vacuum hose. The hose storage module is positioned within the vehicle and is configured to allow the retractable hose to reach any portion of the interior space of the vehicle. The Examiner suggests that the invention of claim 1 would be obvious in view of a combination of Laurent and Shollmayer.

Assuming, *arguendo*, that the combination of Laurent and Schollmayer is tenable, the rejection is still improper as the combination of Laurent and Schollmayer does not reach the Applicant’s claimed invention. If the vacuum cleaner of Schollmayer were combined with the vacuum cleaning unit of Laurent, as suggested in the Office Action, the combination would result in mounting the vacuum cleaning unit of Laurent behind the seat of a vehicle, as taught by

Schollmayer, with the externally accessible nozzle of Laurent or a remotely stored nozzle of Schollmayer. The combination would not teach storing the nozzle in the opening of the seat behind the armrest as asserted by the Examiner.

The combination would also not disclose a console in which the nozzle is stored because, as previously stated, Schollmayer does not disclose a vacuum console 9 adapted to house a vacuum nozzle, as stated on page 4 of the Office Action. What the Examiner has termed a console 9 is an encasing that covers the intake opening 8 where a vacuum hose 6 is attached thereto. As neither reference teaches a console that houses a vacuum nozzle, the resulting combination will not teach a console housing the vacuum nozzle.

There is furthermore no teaching or suggestion in the combination that would render the vacuum console of the claimed invention obvious. Neither reference forming the combination makes any provision whatsoever for a vacuum console. One of ordinary skill in the art would not look at the combination and think to store the nozzle within a console as no console is shown and the combination does not disclose an internal storing of the nozzle. Thus, claim 1 is patentable over the combination of Laurent and Schollmayer as the combination does not disclose the claimed console or any other structure performing the same function. The combination is totally lacking an element of claim 1.

Because claims 2, 3, and 5 depend directly from claim 1, claims 2, 3, and 5 are patentable over the alleged combination due to their dependency on claim 1.

B. Applicants Disagree with the Rejection of Claims 1-3 and 5 as Obvious in View of the Asserted Combination of Laurent, Schollmayer, and Harrelson.

1). The Combination of Laurent, Schollmayer, and Harrelson is Improper.

Harrelson discloses a vacuum cleaning unit that is attachable to the ceiling of a building. The vacuum cleaning unit comprises a housing 10 attached to the ceiling by motorized pulleys 13 and having a hose storage compartment 20 and a vacuum source 48. A vacuum hose 18 is movable between a retracted position where it is stored in the storage compartment 20 and an extended position. A hose drive assembly 16 is provided on the housing 10 to move the hose 18 between the two positions. The vacuum hose 18 has a handle with switches 110, 112, and 113 for controlling, respectively, the hose drive assembly 16, the vacuum source 48, and the pulleys 13.

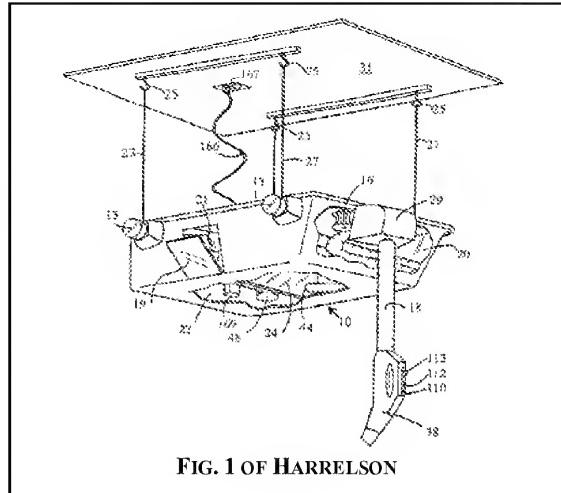


FIG. 1 OF HARRELSON

The combination of Laurent as modified by Schollmayer and applied to claim 1 above and further in view of Harrelson fails for multiple reasons. First, the underlying combination of Laurent and Schollmayer is improper for the previously stated reasons. The addition of Harrelson to the underlying combination does not remedy the shortcomings of the underlying combination.

Second, there is no teaching or suggestion to combine Harrelson with the underlying combination as asserted in the Office Action. On page 7 of the Office Action, the Examiner describes the vacuum system taught by Harrelson as having a “hose storage module 17 adapted to house a retractable vacuum hose having a... handle portion 38... configured with a first switch 112 being electrically connected to a vacuum motor... and a second switch 110 being electrically connected to the hose storage module.” The Examiner then states that, “It would be obvious to a person skilled in the art at the time the invention was made to provide Laurent, as modified by Schollmayer, a handle portion being configured with a first switch being electrically

connected to a vacuum motor to operate the vacuum and a second switch being electrically connected to the hose storage module in view of the teaching of Harrelson in order to automate the vacuum operation as well as eliminate any mechanical failure of spring-wound hose reel.” In making this statement, the Examiner merely provides generalized reasons unsupported by the references for making the combination, as the stated reasons of automating the vacuum operation as well as eliminating any mechanical failure of spring-wound hose reel are not found in any of the references.

In summary, the Examiner has not articulated the reasons why one of ordinary skill in the art would have been motivated to make the combination. The Examiner has not pointed to any teaching or suggestion in the references to make the asserted combination, as is required in a *prima facie* obviousness rejection. As no such teaching or suggestion is sufficiently provided, the obviousness rejection fails to meet the *prima facie* standard and is not tenable. The Examiner has simply relied upon “broad conclusory statements standing alone,” which can only lead to the conclusion that the Examiner is simply relying on impermissible hindsight reconstruction of Applicants’ invention. As a result, the rejection must fail because of the improper combination.

2. Claims 4 and 7-9 are Non-Obvious Over the Alleged Combination, Assuming the Combination is Tenable.

Group B: Claims 4 and 7-9

Claims 4 and 7-9 depend, directly or indirectly, on claim 1. The Examiner suggests that the invention of claims 4 and 7-9 would be obvious in view of a combination of Laurent and Schollmayer as applied to claim 1 above, and further in view of Harrelson.

Initially, the rejection of claims 4 and 7-9 must fail because these claims depend directly or indirectly on claim 1, which as described above, is patentable over the underlying combination and the addition of Harrelson does not eliminate the shortcomings of the underlying combination, resulting in claim 1 being patentable over the combination of Laurent, Schollmayer, and Harrelson. As claims 4 and 7-9 depend directly or indirectly from claim 1, they also are non-obvious in view of the new combination.

Even if the combination could be made, it would not reach claim 1. Claim 1, among other things, calls for a vacuum system for a vehicle comprising a hose storage module, a vacuum console, and a vacuum canister wherein the vacuum console is adapted to house a vacuum nozzle attached to the first end of a vacuum hose. As discussed previously, the combination of Laurent and Schollmayer would result in mounting the vacuum cleaning unit of Laurent behind the seat of a vehicle, as taught by Schollmayer, with the externally accessible nozzle of Laurent or a remotely stored nozzle of Schollmayer. The combination would not teach storing the nozzle in a console. The addition of Schollmayer to the base combination does not add the teaching of storing the nozzle in the console. As such, the combination with Harrelson does not reach claim 1. Therefore, claims 4 and 7-9 are non-obvious and patentable over Laurent and Schollmayer as applied to claim 1 and further in view of Harrelson for the same reasons as claim 1 is non-obvious and patentable over Laurent and Schollmayer based on their direct or indirect dependency on claim 1.

CONCLUSION

In view of the foregoing, it is submitted that the rejection of claims 1-5 and 7-9 is improper and should not be sustained. Therefore, a reversal of the rejections of claims 1-5 and 7-9 is respectfully requested.

Respectfully submitted,

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VIII. CLAIMS APPENDIX

1. (Original) A vacuum system for a vehicle comprising:
 - a hose storage module adapted to house a retractable vacuum hose having a first end and a second end;
 - a vacuum console adapted to house a vacuum nozzle attached to the first end of the vacuum hose; and
 - a vacuum canister fluidly connected to the second end of the vacuum hose, the hose storage module being positioned within the vehicle and configured to allow the retractable hose to reach any portion of the interior space of the vehicle.
2. (Original) The vacuum system of claim 1, wherein the vacuum console comprises a pivotal and slideable cover in the shape of a vehicle seat.
3. (Original) The vacuum system of claim 1, wherein the vacuum console is part of the vehicle seat.
4. (Original) The vacuum system of claim 1, wherein the nozzle comprises a handle portion and a suction portion, the handle portion being configured with a first switch being electrically connected to a vacuum motor to operate the vacuum and a second switch being electrically connected to the hose storage module to operate a motorized extension and retraction of the hose.
5. (Original) The vacuum system of claim 1, wherein the vacuum canister is driven by a vacuum motor which is rechargeable by a deep draw battery.
6. (Original) The vacuum system of claim 1, wherein the hose storage module

comprises a reel having a frame being formed from a plurality of cross members and spaced from each other by end brackets, one side of the frame being configured to be mounted to the back of the vehicle seat.

7. (Original) The vacuum system of claim 1, wherein the hose storage module comprises a hose retraction system having a roller with a concave surface, the concave surface having a radius roughly the same as that of the vacuum hose.

8. (Original) The vacuum system of claim 7, wherein the roller has a plurality of projections sized and spaced from each other to engage a corresponding plurality of adjacent valleys on at least one side of the vacuum hose.

9. (Original) The vacuum system of claim 4, wherein the electrical connections are made by electrical wiring that runs along the hose and is connected to a wiring module.

10. (Original) The vacuum system of claim 1, further comprising a cleaning solution tank and a conduit extending from the cleaning solution tank to a spray nozzle for dispensing cleaning solution.

11. (Original) The vacuum system of claim 10, wherein the nozzle further comprises a control electrically connected to the nozzle for controlling dispensing of the cleaning solution through the spray nozzle.

12. (Canceled)

13. (Previously Presented) The vacuum system of claim 21, further comprising a vacuum console adapted to house a vacuum nozzle attached the other end of the vacuum hose;

the vacuum console comprising a pivotal and slideable cover in the shape of a vehicle seat.

14. (Original) The vacuum system of claim 13, wherein the nozzle comprises a handle portion and suction portion, the handle portion being configured with a first switch being electrically connected to a vacuum motor to operate the vacuum and a second switch being electrically connected to the hose storage module to operate a motorized extension and retraction of the hose.

15. (Previously Presented) The vacuum system of claim 21, wherein the hose storage module comprises a hose retraction system having a roller with a concave surface, the concave surface having a radius roughly the same as that of the vacuum hose.

16. (Original) The vacuum system of claim 15, wherein the roller has a plurality of projections sized and spaced from each other to engage a corresponding plurality of adjacent valleys on at least one side of the vacuum hose.

17. (Canceled)

18. (Previously Presented) The vacuum system of claim 21, further comprising a cleaning solution tank and a conduit extending from the cleaning solution tank to a spray nozzle for dispensing cleaning solution.

19-20. (Cancelled)

21. (Previously Presented) A vacuum system for a vehicle comprising:
a hose storage module adapted to house a retractable vacuum hose on a storage reel and comprising a storage space, a frame, a hub on the storage reel and mounted to the frame

for rotation about an axis, a vacuum hose having one end mounted to the hub and a roller fixedly mounted relative to the frame adjacent to the reel in a position to engage the vacuum hose in order to urge the vacuum hose onto and off of the reel when the roller rotates;

wherein the frame has a slot extending from the axis toward the roller and the hub moves within the slot, the hub being biased toward the roller to keep the vacuum hose engaged with the roller;

a vacuum canister fluidly connected to an end of the vacuum hose; and
one or more switches in electrical communication with the hose storage module and configured to extend and retract the hose into and out of the storage space.

22. (Previously Presented) A cleaning system for a vehicle comprising:
- an interior space, with a front seat, a rear seat, and a storage area located in the interior space behind the rear seat, and
- a cleaning system located in the storage area, the cleaning system comprising:
- a vacuum canister fixedly mounted to the vehicle and configured to draw a vacuum in the canister;
- a hose fluidly connected to the vacuum canister;
- a suction nozzle on the hose;
- a cleaning solution tank for holding carpet and upholstery cleaning solution;
- a conduit extending from the cleaning solution tank to a spray nozzle for dispensing cleaning solution from the cleaning solution tank; and

a control on the suction nozzle to control operation of the vacuum and the spray nozzle.

23. (Previously Presented) The vehicle of claim 22, wherein the cleaning system further comprises a storage module having:

a frame;
a hub on the reel and mounted to the frame for rotation about an axis;
one end of the vacuum hose being mounted to the hub; and
a roller fixedly mounted relative to the frame adjacent to the reel in a position to engage the vacuum hose in order to urge the vacuum hose onto and off of the reel when the roller rotates.

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IX. EVIDENCE APPENDIX

No evidence has been entered by the Examiner or Appellants into the record.

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X. RELATED PROCEEDINGS APPENDIX

There being no decision rendered by a court or the Board in any related proceeding, none is listed here.